

The Patent Office  
Cardiff Road  
Newport  
South Wales NP10 8QQ

17 March 2004

Dear Sirs,

British Patent Application No. 0316635.2  
**Image Projecting Apparatus**  
**Samsung Electronics Co., Ltd**  
*Our ref: SLG/44391GB1*

In response to the Official Letter of 10 December 2003, we file herewith, in duplicate, the following:

**Claims**

Nos. 1-11 to replace nos. 1-13 as originally filed.

**Description**

Page 5 to replace page 5 as originally filed.

**Remarks**

Novelty

Neither US6219110 nor EP0646828 discloses an optical path including a TIR as specified in amended claim 1. US5467146 and WO 01/33865 disclose the use of a TIR prism but the arrangements of the light source and the two mirrors disclosed therein are different to that specified in amended claim 1. More particularly, claim 1 now states that the mirrors and light source are disposed to one side of the micromirror device and that the light path never crosses an infinite, imaginary plane comprising the point of incidence of the light ray on the DMD panel and having the

axis of the light source perpendicular thereto (see 390b in Figure 4). Such a plane in the apparatuses according to US 5467146 and WO 01/33865 would intersect the light path between the light source and the first mirror. Thus, amended claim 1 is novel. Corresponding amendments were made to independent claim 6 (originally claim 8).

Clarity

In response to paragraph 3 of the official letter, lines 20-21 on page 5 have been amended to describe a "plane perpendicular to the mirror-bearing face of the DMD panel and parallel to the longer side L of the movable mirror surface". The term normal has further been replaced by the term perpendicular in claims 6 and 8 (formerly claims 8 and 10) and deleted in claim 7 (formerly claim 9).

Moreover, claim 2, formerly claim 3, has been amended by replacing the phrase 'approximately diagonally' with a better form of words. The claim now states that the micromirror is rectangular and that the light approaches the micromirror device in a path having a component approximately along a diagonal of the micromirror device. It is submitted that the scope of claim 2 is clear.

It is submitted that the present application now meets the requirements of the Act and the Patents Rules.

Yours faithfully,

Stuart Geary



INVESTOR IN PEOPLE

Samsung Electronics Co., Ltd  
% Venner, Shipley & Co  
20 Little Britain  
LONDON  
EC1A 7DH

**The Patent Office  
Patents Directorate**

Concept House  
Cardiff Road, Newport  
South Wales NP10 8QQ

Examiner: 01633 813743  
†E-mail: [jeremy.cowen@patent.gov.uk](mailto:jeremy.cowen@patent.gov.uk)  
Switchboard: 01633 814000  
Fax: 01633 814444  
Minicom: 08459 222250  
DX 722540/41 Cleppa Park 3  
<http://www.patent.gov.uk>

**Your Reference: SLG/44391GB1  
Application No: GB 0316635.2**

10 December 2003

Dear Sirs

**Patents Act 1977:**

**Combined Search and Examination Report under Sections 17 and 18(3)**

**Latest date for reply:** 16 July 2004

I enclose two copies of my search and examination report and three copies of the citations.

By the above date you should either file amendments to meet the objections in the report or make observations on them. If you do not, the application may be refused.

**Publication**

I estimate that, provided you have met all the formal requirements, preparations for publication of your application will be completed soon after **13 January 2004**. At this time you will receive a letter confirming the exact date when the preparations for publication will be completed. This letter will also tell you the publication number and date of publication of your application.

**Withdrawal/amendment**

If you wish to withdraw your application before it is published you must do so before the preparations for publication are complete. **WARNING** - after preparations for publication are complete it will NOT be possible to withdraw your application from publication.

---

†Use of E-mail: Please note that e-mail should be used for correspondence only.



INVESTOR IN PEOPLE

Application No: GB 0316635.2

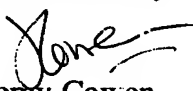
Page 2

10 December 2003

If you wish to file amended claims for inclusion with the published application you must do so before the preparations for publication are completed. If you write to the Office less than 3 weeks before 13 January 2004 please mark your letter prominently:

**"URGENT - PUBLICATION IMMINENT".**

Yours faithfully

  
Jeremy Cowen  
Examiner

**Important information about combined search and examination**

I also ask that you take note of the following points. These might have a bearing on the future stages of your application because the examination report has been sent to you before your application has been published.

- (a) You may file voluntary amendments before making a full response to my examination report. We will publish with your application any new or amended claims you file voluntarily or as a full response, provided that they are received before preparations for publication are completed. It would help us when you file amendments before publication if you could prominently indicate in a covering letter whether or not the amendments are intended as a full response to the examination report.
- (b) If you file a full response to the examination report before your application is published I will consider it as soon as possible. However, if this would disrupt the publication of your application, I would have to delay taking any action until the application had been published. This delay could be up to 3 months, depending upon when we receive your response.
- (c) There is another situation when there might be a delay between you filing a full response and the Patent Office responding to it. This would arise if you met all my objections but your application had not or had only recently been published. I could not report the outcome of my re-examination until I was satisfied that the search was complete for documents published before the priority date of your invention and that anybody interested in the application has had three months following publication of the application to make observations on the patentability of your invention.
- (d) Provided that the requirements of the Act have been met, I can send your application to grant as early as three months after publication. Before doing so I will bring the original search up to date and raise with you any further objection that might result from this top-up search. However, there is a possibility that at that time I may not have access to all the patent applications published after the priority date of your invention and of possible relevance to your application. If this is the case I would have to complete the search after grant and if necessary raise any new found novelty objection then.



INVESTOR IN PEOPLE

Application No: GB 0316635.2  
Claims searched: 1,8

Examiner: Jeremy Cowen  
Date of search: 9 December 2003

## Patents Act 1977 : Search Report under Section 17

### Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance	
X, Y	X:1,2,8 Y:7	JP 2001109062 A	(Minolta), see abstract & figure 9
X, Y	X:1,2,8 Y:7	WO 01/33865 A1	(Sim2 Multimedia), see line 30, page 2 to line 9, page 3
X, Y	X:1,2,8 Y:7	US 6219110 B1	(IBM Japan & Advanced Peripheral Technologies), see figure 8
X, Y	X:1,2,8 Y:7	US 5467146	(Texas Instruments), see figure 2
Y	7	EP 0646828 A1 1,2,8	(Seiko Epson), see abstract

### Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

### Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC<sup>v</sup>:

G2J,H4F

Worldwide search of patent documents classified in the following areas of the IPC<sup>7</sup> :

G03B,H04N

The following online and other databases have been used in the preparation of this search report :

WPI,EPODOC,PAJ